Transportation Revenue and Autonomous Vehicles

UO School of Planning, Public Policy and Management
Public Budget Administration

Kerry Edinger

Rebecca Lewis, PhD, Instructor

Public Budget Administration

- 26 Master of Public Administration second year students
- Three Portland, two Tualatin, and two Tigard groups
- Three reports and a final presentation

Sustainable City Year Program project goal

- Cities are researching policy options to accommodate new transportation technologies
- Two research questions:
  - How will autonomous vehicles (AVs) impact transportation revenues in Tigard, Tualatin, and Portland?
  - What could replace lost revenue caused by AVs?

Project assumptions

- 50% of cars will be connected autonomous vehicles
- 100% of AVs will be electric vehicles
- 85% of AVs will be shared; 15% privately owned

How will autonomous vehicles impact transportation revenues in the Portland region?

Tigard, Tualatin, Portland

Autonomous vehicles: Changing cities

Potential benefits

- Improving safety
- Increasing mobility
- Increasing road capacity
- Lowering emissions

Potential challenges

- Street design
- Parking planning
- Operating transit
- Land zoning
- Declining revenue

Fagnant and Kockelman, 2015

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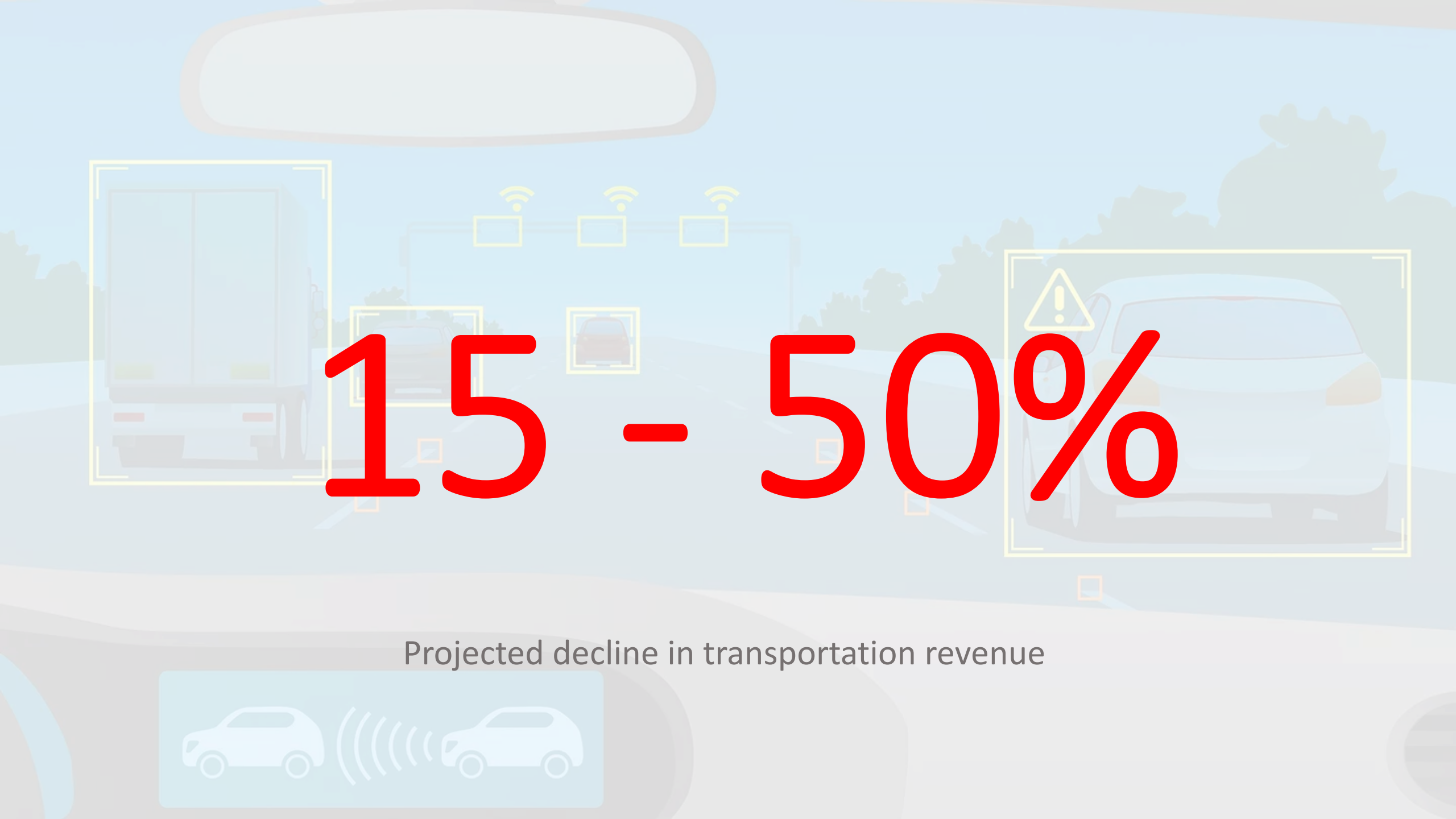
- **Declining revenue**

Fagnant and Kockelman, 2015

Expected Fiscal Impacts of AVs

Reductions:

- Gasoline taxes
- Vehicle registration
- Traffic and parking citations
- Vehicle impound fees
- Parking revenue



Projected decline in transportation revenue

What could replace lost revenue caused by autonomous vehicles?

AV Revenue Opportunities

- Vehicle miles traveled (VMT) fees
- Cordon (congestion) pricing
- On/off ramp fees

AV Revenue Opportunities (new)

- Pick up and drop off zones
  - Assessed annual fees or geofencing
- Empty seat tax
- Fleet parking fees
- Use of curb access

AV Revenue Opportunities (new)

- GPS and data fees
- Mobile business tax
- Electricity fees
- Charging stations
- Advertisement tax

Summary of AV Revenue Policy Options

- Vehicle miles traveled (VMT) fees
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Kerry Edinger @ gmail.com

With contributions by Rebecca Lewis, Nico Larco, and UO MPA class of 2018